In the claims:

Please amend the claims as follows:

Claims 1-39 (cancelled).

40. (New) An isolated nucleic acid comprising a nucleotide sequence encoding a sterol Δ^7 reductase polypeptide, said nucleotide sequence having a mutation in a nucleotide region that encodes a mixed charge cluster domain.

41. (New) The isolated nucleic acid of claim 40, wherein said mutation is a deletion.

42. (New) The isolated nucleic acid of claim 40, wherein said mutation introduces an insertion in said polypeptide.

43. (New) The isolated nucleic acid of claim 40, wherein said mutation introduces a substitution in said polypeptide.

44. (New) The isolated nucleic acid of claim 40, wherein said mutation introduces a substitution and an insertion in said polypeptide.

45. (New) The isolated nucleic acid of claim 40, wherein said mutation introduces a substitution and an insertion of 44 amino acids in said polypeptide.

46. (New) The isolated nucleic acid of claim 41, wherein said nucleotide sequence comprises SEQ ID NO:28 and wherein said deletion is at position 4012, 4013, or 4014 of SEQ ID NO:28.

47. (New) The isolated nucleic acid of claim 46, wherein said deletion encodes a polypeptide having a mutation at one or more of the amino acids at positions 423, 424, 425, 426, 427, 428, 429, 430, 431, or 432 of SEQ ID NO:29.

48. (New) The isolated nucleic acid of claim 46, comprising the nucleotide sequence of SEQ ID NO:30.

49. (New) The isolated nucleic acid of claim 47, encoding the polypeptide set forth in SEQ ID NO:31.

50. (New) The isolated nucleic acid of claim 40 further comprising a control element operably linked to said nucleotide sequence.

51. (New) A host cell comprising the nucleic acid of claim 50.

52. (New) A transgenic plant comprising the nucleic acid of claim 50.

53. (New) A seed from the transgenic plant of claim 52.

54. (New) A method of producing a transgenic plant comprising:

(a) introducing the nucleic acid of claim 50 into a plant cell to produce a transformed plant cell; and

(b) producing a transgenic plant from said transformed plant cell.

55. (New) An isolated nucleic acid comprising the nucleotide sequence depicted at nucleotide positions 1-670 of SEQ ID NO:28.

56. (New) An isolated nucleic acid comprising the nucleotide sequence depicted at nucleotide positions 4045-4243 of SEQ ID NO:28.

57. (New) An isolated sterol Δ^7 reductase coding sequence having at least one mutation, said at least one mutation at a position in a nucleotide region that encodes a mixed charge cluster domain.

58. (New) The coding sequence of claim 57 encoding the polypeptide of SEQ ID NO:31.

59. (New) An isolated nucleic acid comprising a control element operably linked to the coding sequence of claim 57.

60. (New) A host cell comprising the nucleic acid of claim 59.

61. (New) A transgenic plant comprising the nucleic acid of claim 59.

62. (New) A seed from the transgenic plant of claim 61.

63. (New) A method of producing a transgenic plant comprising:

(a) introducing the nucleic acid of claim 59 into a plant cell to produce a transformed plant cell; and

(b) producing a transgenic plant from said transformed plant cell.

64. (New) The sterol Δ^7 reductase coding sequence of claim 57, wherein the polypeptide encoded by said coding sequence is defective for catalyzing the sterol Δ^7 reduction of episterol to 24-methylenecholesterol and campesterol, relative to a corresponding polypeptide encoded by a wild type sterol Δ^7 reductase coding sequence.

65. (New) The transgenic plant of claim 61, wherein said plant is more effective at converting episterol to C-7-dehydrocampesterol relative to a corresponding plant expressing a wild type sterol Δ^7 reductase coding sequence.

66. (New) The transgenic plant of claim 61, wherein said plant is more effective at converting episterol to C-7-dehydrocampestanol relative to a corresponding plant expressing a wild type sterol Δ^7 reductase coding sequence.

67. (New) A nucleic acid comprising a control element operably linked to the coding sequence of claim 64.

68. (New) A host cell comprising the nucleic acid of claim 67.

69. (New) A transgenic plant comprising the nucleic acid of claim 67.

70. (New) A seed from the transgenic plant of claim 69.

71. (New) A method of producing a transgenic plant comprising:

(a) introducing the nucleic acid of claim 67 into a plant cell to produce a transformed plant cell; and

(b) producing a transgenic plant from said transformed plant cell.

72. (New) A recombinant vector comprising (i) the nucleic acid of claim 40; and (ii) control elements operably linked to said nucleotide sequence.

73. (New) A host cell comprising the recombinant vector of claim 72.

74. (New) A transgenic plant comprising the recombinant vector of claim 72.

75. (New) A seed from the transgenic plant of claim 74.

76. (New) A method of producing a transgenic plant comprising:

(a) introducing the recombinant vector of claim 72 into a plant cell to produce a transformed plant cell; and

(b) producing a transgenic plant from said transformed plant cell.

77. (New) The plant of any of claims 52, 61, 65, 66, 69, and 74, wherein said plant exhibits one or more characteristics selected from the group consisting of: small, dark-green, round

leaves; short robust stature; short internodes; short pedicels; short petioles; and increased number of inflorescences relative to a corresponding plant expressing a wild type sterol Δ^7 reductase coding sequence.